

## Appendix H: Wildlife Resources

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## Appendix H –Wildlife Resources

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## Threatened and Endangered Species, Special Status Species Plants and Animals

Special status species include species listed, proposed for listing, or candidate species under the Endangered Species Act and sensitive species identified by the BLM

Species	USFWS Status	BLM Status
<b>Mammals</b>		
<i>White-tailed prairie dog</i>	None	Sensitive
<i>Black-tailed prairie dog</i>	None	Sensitive
<i>Black-footed ferret*</i>	Endangered	
<i>Gray wolf</i>	Threatened (experimental pop.)	
<i>Grizzly Bear</i>	Threatened	
<i>Canada Lynx</i>	Threatened	
<i>Wolverine</i>	Candidate	
<i>Townsend's big-eared bat</i>		Sensitive
<i>Spotted bat</i>		Sensitive
<i>Fringe-tailed myotis bat</i>		Sensitive
<i>Long-legged myotis bat</i>		Sensitive
<i>Long-eared myotis bat</i>		Sensitive
<i>Pallid bat</i>		Sensitive
<b>Birds</b>		
<i>Whooping crane</i>	Endangered	
<i>Mountain plover</i>	Proposed	Sensitive
<i>Greater sage-grouse</i>	Candidate	Sensitive
<i>BLM sensitive raptors (peregrine falcon, burrowing owl, ferruginous hawk, Swainson's hawk)</i>	None	Sensitive
<i>Migratory birds</i>	None	Sensitive
<b>Reptiles/Amphibians</b>		
<i>Greater short-horned lizard</i>		Sensitive
<i>Milk snake</i>		Sensitive
<i>Northern leopard frog</i>		Sensitive
<i>Spiny softshell turtle</i>		Sensitive
<i>Western hog-nosed snake</i>		Sensitive
<b>Fish</b>		
<i>Yellowstone Cutthroat Trout</i>		Sensitive
<i>Sauger</i>		

**Special Status Plants in the Billings Field Office Planning Area**

<b>Common Name<sup>1</sup></b>	<b>Scientific Name<sup>1</sup></b>	<b>Global/State Status</b>
Nodding rock cress	<i>Arabis demissa</i> v. <i>languid</i> ( <i>Boechera demissa</i> )	G5S1S3
Cushion milkvetch	<i>Astragalus aretioides</i> ( <i>Orophaca aretioides</i> )	G4S2
Geyer's milkvetch	<i>Astragalus geyeri</i>	G4S2
Gray's milkvetch	<i>Astragalus grayi</i>	G4?S2
Oregon milkvetch	<i>Astragalus oreganus</i>	G4?S1
Blackfoot River evening-primrose	<i>Camissonia andina</i> ( <i>Oenothera andina</i> )	G4S2
Lewis River suncup	<i>Camissonia parvula</i> ( <i>Oenothera parvula</i> )	G5S1
Yellow spiderflower	<i>Cleome lutea</i>	G5S1
Pinyon Desert cryptantha	<i>Cryptantha scoparia</i>	G4S1
Spiny hopsage	<i>Grayia spinosa</i>	G5S2
Mat prickly phlox	<i>Leptodactylon caespitosum</i>	G4S2
Pryor Mountain bladderpod	<i>Lesquerella lesicii</i> ( <i>Physaria lesicii</i> )	G1S1
Torrey's desert dandelion	<i>Malacothrix torreyi</i> ( <i>M. sonchoides</i> v. <i>torreyi</i> )	G4S1
Dwarf mentzelia	<i>Mentzelia pumila</i>	G4S2
Leafy nama	<i>Nama densum</i>	G5S1
Wasatch bluegrass	<i>Poa arnowiae</i> ( <i>P. curta</i> )	G4S1
Platte River cinquefoil	<i>Potentilla platensis</i>	G4S1
Largeflower goldenweed	<i>Pyrrocoma carthamoides</i> v. <i>subsquarrosa</i> ( <i>Haplopappus carthamoides</i> var. <i>subsquarrosus</i> )	G4G5T2T3S2
Persistent sepal yellowcress	<i>Rorippa calycina</i>	G3S1
Shoshone carrot	<i>Shoshonea pulvinata</i>	G2G3S1
Salty buckwheat	<i>Stenogonum salsuginosum</i> ( <i>Eriogonum</i> s.)	G4?S1
<p>The international network of Natural Heritage Programs employs a standardized ranking system to denote global (G) (range-wide) and State (S) (Nature-Serve 2006) status. Species are assigned numeric ranks ranging from 1 (highest risk, greatest concern) to 5 (demonstrably secure), reflection the relative degree of risk to the species' viability, based upon available information.</p> <p><b>G1 S1</b> At high risk because of extremely limited and/or rapidly declining numbers, range, and/or habitat, making it highly vulnerable to global extinction or extirpation in the state.</p> <p><b>G2 S2</b> At risk because of very limited and/or declining numbers, range, and/or habitat, making it vulnerable to global extinction or extirpation in the state.</p> <p><b>G3 S3</b> Potentially at risk because of limited and/or declining numbers, range, and/or habitat, even though it may be abundant in some areas.</p> <p><b>G4 S4</b> Uncommon but not rare (although it may be rare in parts of its range), and usually widespread. Apparently not vulnerable in most of its range, but possibly cause for long-term concern.</p> <p><b>G5 S5</b> Common, widespread, and abundant (although it may be rare in parts of its range). Not vulnerable in most of its range.</p> <p><b>Sub-rank</b></p> <p><b>T#</b> Rank of a subspecies or variety. Appended to the global rank of the full species, e.g. G4T3</p> <p>? Inexact Numeric Rank - Denotes uncertainty; inexactness.</p> <p><sup>1</sup>Species nomenclature consistent with the USDA PLANTS database (USDA 2009).</p>		

# US Fish and Wildlife Consultation Memorandum



## United States Department of the Interior Fish and Wildlife Service



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January 11, 2010

**To:** Field Manager, Bureau of Land Management, Billings Field Office, Billings, MT

**From:** Field Supervisor, FWS, Ecological Services Field Office, Helena, MT

**Subject:** Threatened and Endangered Species List and Migratory Bird Input For Resource Management Plan Development

This is in response to your letter dated November 24, 2009 requesting information from the U.S. Fish and Wildlife Service (Service) on federally listed threatened and endangered species that may occur in the vicinity of Bureau of Land Management (BLM) administered lands in Big Horn, Carbon, Golden Valley, Musselshell, Stillwater, Sweet Grass, Wheatland, and Yellowstone Counties. We understand that BLM has initiated a revision of the Resource Management Plan (RMP) that guides management of BLM administered surface and mineral estate acres in these counties. Your request was received in this office on November 25, 2009.

Species that are currently listed as threatened, endangered, proposed or candidates for protection under the Endangered Species Act and the counties in which they occur include:

Common Name	Scientific Name	Status	Counties
Black-footed ferret	<i>Mustela nigripes</i>	E/XN	Big Horn, Carbon, Golden Valley, Musselshell, Stillwater, Sweet Grass, Wheatland, Yellowstone
Grizzly Bear	<i>Ursus arctos horribilis</i>	T	Carbon, Stillwater, Sweet Grass
Canada Lynx	<i>Lynx canadensis</i>	T, CH	Carbon, Stillwater, Sweet Grass
Whooping Crane	<i>Grus americana</i>	E	Yellowstone

E – endangered; T – threatened; CH – critical habitat; XN – non-essential experimental population

A number of species with potential habitat in central and southern Montana may become candidate or listed species within the next year. The species currently under consideration and the anticipated date of the release of the finding of whether listing is warranted are:

Greater Sage Grouse ( <i>Centrocercus urophasianus</i> )	Feb. 26, 2010
Northern Leopard Frog ( <i>Lithobates pipiens</i> )	July 1, 2010
Mountain Plover ( <i>Charadrius montanus</i> )	July 31, 2010
Sprague's Pipit ( <i>Anthus spragueii</i> )	Sept. 1, 2010
White-tailed Prairie Dog ( <i>Cynomys leucurus</i> )	June 1, 2010

This species list is valid for 90 days. If the RMP is not completed in that time, you may reconfirm the currently listed species for the project area at:

[http://www.fws.gov/montanafieldoffice/Endangered\\_Species/Listed\\_Species.html](http://www.fws.gov/montanafieldoffice/Endangered_Species/Listed_Species.html)

#### Mountain Plover

At this time, we are providing additional information on the mountain plover. Mountain plover breeding and wintering habitats include grasslands, mixed grassland areas and short-grass prairie, shrub-steppe, plains, alkali flats, agricultural lands, cultivated lands, sod farms, and prairie dog towns. Plovers may nest on sites where vegetation is sparse or absent, or near closely cropped areas, manure piles or rocky areas. Mountain plovers are rarely found near water and show a preference for previously disturbed areas or modified habitat. In Montana, mountain plovers prefer active prairie dog towns.

On December 30, 1982, we designated the mountain plover as a category 2 candidate species, meaning that more information was necessary to determine whether the species status is declining, stable, or improving (47 FR 58458). In 1990, we prepared a status report on the mountain plover indicating that Federal listing may be warranted (Leachman and Osmundson 1990). We elevated the mountain plover to a category 1 candidate species in the November 15, 1994, Animal Candidate Notice of Review (59 FR 58982). At that time, category 1 candidate species were defined as those species for which we had sufficient information on biological vulnerability and threats to support issuance of a proposed rule to list. In 1996, we redefined candidate species and eliminated category 2 and 3 candidate designations (61 FR 64481). Candidate species were defined using the old category 1 definition. The mountain plover retained its candidate species designation as reported in the September 19, 1997, Review of Plant and Animal Taxa (62 FR 49398). On July 7, 1997, we received a petition to list the mountain plover as threatened from the Biodiversity Legal Foundation. The Service responded by notifying the petitioner that petitions for candidate species are considered second petitions, because candidate species are species for which we have already decided that listing may be warranted. Therefore, no 90-day finding was required for the Biodiversity Legal Foundation's petition. We published a proposed rule to list the mountain plover as threatened on February 16, 1999 (64 FR 7587). After gathering additional information, the Service published the Proposed rule again (67 FR 72396) with a 4(d) rule. We published a Not Warranted/Withdrawal



(68 FR 53083) on September 9, 2003. We were subsequently sued. The Service settled a lawsuit on the 2003 Not Warranted finding for mountain plover (68 FR 53083) by agreeing to submit a Federal Register notice reopening the proposal to list the mountain plover and providing for public comment by July 31, 2009. Upon the publication of this notice, the withdrawal of the proposed rule (68 FR 53083) from 2002 will be vacated, meaning that it will be back in effect and the plover will be a proposed species again. A final decision is due by May 1, 2011. The FR notice will allow an opportunity to provide new information to the public for review and comment, but won't be an analysis of the status of the species.

After July 31, 2010, the mountain plover will be a proposed species and therefore we will again be reviewing project impacts to this species under the Act. We strongly encourage the lead federal agency to develop protective measures, with an assurance of implementation should mountain plovers be found within the project areas. Although conferencing on species proposed for listing is only required when the proposed action is likely to jeopardize that species, development of protective measures through conferencing can expedite consultation requirements should the species be listed prior to the completion of the project/actions.

To minimize potential adverse impacts to plovers in sites planned for development, the Service recommends surveys for mountain plovers in all suitable habitat as well as avoidance of nesting areas from April 10 through July 10. Please refer to the Mountain Plover Survey Guidelines (March 2002), for information regarding surveys and protection stipulations. For instance, the Service recommends that if an active mountain plover nest site is found, project activities near the nest site should be delayed 37 days or 7 days post hatching. If a brood of flightless chicks is observed, activities should be delayed at least 7 days. Cessation of disturbance in occupied plover habitat during the breeding season will help to protect nests and flightless broods. While the Service believes that surveys and avoidance of nesting and brood rearing areas will reduce the chances of direct impacts to and mortality of individual mountain plovers within the area, we also recommend consideration of changes in habitat suitability and habitat loss during project planning. Measures to protect the mountain plover from further decline may include (1) avoidance of suitable habitat during the plover nesting season (April 10 through July 10), (2) prohibition of ground disturbing activities in prairie dog towns, and (3) prohibition of any permanent above ground structures that may provide perches for avian predators or deter plovers from using preferred habitat.

Until July 31, 2010, we encourage the Bureau and their applicants to continue providing protection for this species as it remains protected under the Migratory Bird Treaty Act (16 U.S.C. 703) and as a sensitive species under Bureau policy (Bureau Manual 6840.06 E. Sensitive Species).

There may be state species of concern in the vicinity of these sites and we recommend contacting the Montana Department of Fish, Wildlife and Parks at 1420 East Sixth Ave., P.O. Box 200701, Helena, MT 59620-0701, 406-444-2535 or the Montana Natural Heritage Program, 1515 East 6<sup>th</sup> Avenue, Box 201800, Helena, MT 59620-1800, 406-444-5354. Information for state species of concern, along with observation data for many plant and animal species

(including federally listed species), may be accessed via the Natural Heritage Tracker at:  
<http://mtnhp.org/Tracker/NHTMap.aspx>.

### **Migratory Birds**

All federal agencies have an obligation to protect and conserve the many species of migratory birds, including eagles and other raptors protected under the Migratory Bird Treaty Act (MBTA), Bald and Golden Eagle Protection Act, and Migratory Bird Executive Order 13186 (January 11, 2001). The MBTA, 16 U.S.C. 703, enacted in 1918, prohibits the taking of any migratory birds, their parts, nests, or eggs except as permitted by regulations and does not require intent to be proven. Section 703 of the MBTA states, "Unless and except as permitted by regulations ... it shall be unlawful at any time, by any means or in any manner, to ... take, capture, kill, attempt to take, capture, or kill, or possess ... any migratory bird, any part, nest, or eggs of any such bird..." The BGEPA, 16 U.S.C. 668, prohibits knowingly taking, or taking with wanton disregard for the consequences of an activity, any bald or golden eagles or their body parts, nests, or eggs, which includes collection, molestation, disturbance, or killing.

Under the MBTA (16 U.S.C. 703-712: Ch. 128 *as amended*) activities in grassland, wetland, stream, and woodland habitats, and those that occur on bridges (e.g., which may affect swallow nests on bridge girders) that would otherwise result in the taking of migratory birds, eggs, young, and/or active nests should be avoided.

Although the provisions of MBTA are applicable year-round, most migratory bird nesting activity in Montana occurs during the period of April 15 to July 15. However, some migratory birds are known to nest outside of the primary nesting season. For example, raptors can be expected to nest in woodland habitats during February 1 through July 15, whereas sedge wrens which occur in some wetland habitats normally nest from July 15 to September 10.

The 1988 amendment to the Fish and Wildlife Conservation Act mandates the USFWS to "identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act of 1973." *Birds of Conservation Concern 2008 (BCC 2008)* is the most recent effort to carry out this mandate. The overall goal of this report is to accurately identify the migratory and non-migratory bird species (beyond those already designated as federally threatened, endangered or proposed) that represent our highest conservation priorities and draw attention to species in need of conservation action. Bird species that occur in Montana that are included in *Birds of Conservation Concern 2008* and may occur in your project area are listed at the end of this document as an appendix. A list of all birds protected under the MBTA can be found at: <http://www.fws.gov/migratorybirds/RegulationsPolicies/mbta/mbtandx.html>.

Migratory birds are of great ecological and economic value to this country and to other countries. The United States has recognized the critical importance of this shared resource by ratifying international, bilateral conventions for the conservation of migratory birds. Such conventions include the Convention for the Protection of Migratory Birds with Great Britain on

behalf of Canada 1916, the Convention for the Protection of Migratory Birds and Game Mammals-Mexico 1936, the Convention for the Protection of Birds and Their Environment - Japan 1972, and the Convention for the Conservation of Migratory Birds and Their Environment - Union of Soviet Socialist Republics 1978. These migratory bird conventions impose substantive obligations on the United States, and therefore the Corps, for the conservation of migratory birds and their habitats.

The Service appreciates your efforts to incorporate fish and wildlife resource concerns, including threatened and endangered species, into your project planning. If you have questions or comments related to this issue, please telephone Lou Hanebury at 406-247-7367.

#### Literature Cited

Leachman, B., and B. Osmundson. 1990. Status of the mountain plover. A literature review. U.S. Fish and Wildlife Service. Golden, Colorado. 83 pp.

Appendix I USFWS – Birds of Conservation Concern 2008 in Montana

American Bittern	<i>Botaurus lentiginosus</i>	Marbled Godwit	<i>Limosa fedoa</i>
Baird's Sparrow	<i>Ammodramus bairdii</i>	McCown's Longspur	<i>Calcarius mccownii</i>
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Mountain Plover	<i>Charadrius montanus</i>
Black Rosy-Finch	<i>Leucosticte atrata</i>	Nelson's Sharp-tailed Sparrow	<i>Ammodramus nelsoni</i>
Black Swift	<i>Cypseloides niger</i>	Olive-sided Flycatcher	<i>Contopus cooperi</i>
Black Tern	<i>Chlidonias niger</i>	Peregrine Falcon	<i>Falco peregrinus</i>
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	Pinyon Jay	<i>Gymnorhinus cyanocephalus</i>
Buff-breasted Sandpiper	<i>Tryngites subruficollis</i>	Prairie Falcon	<i>Falco mexicanus</i>
Burrowing Owl	<i>Athene cunicularia</i>	Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>
Calliope Hummingbird	<i>Stellula calliope</i>	Sage Sparrow	<i>Amphispiza belli</i>
Cassin's Finch	<i>Carpodacus cassinii</i>	Sage Thrasher	<i>Oreoscoptes montanus</i>
Chestnut-collared Longspur	<i>Calcarius ornatus</i>	Short-billed Dowitcher	<i>Limnodromus griseus</i>
Dickcissel	<i>Spiza maerica</i>	Short-eared Owl	<i>Asio flammeus</i>
Ferruginous Hawk	<i>Buteo regalis</i>	Smith's Longspur	<i>Calcarius pictus</i>
Flammulated Owl	<i>Otus flammeolus</i>	Solitary Sandpiper	<i>Tringa solitaria</i>
Golden Eagle	<i>Aquila chrysaetos</i>	Sprague's Pipit	<i>Anthus spragueii</i>
Grasshopper Sparrow	<i>Ammodramus savannarum</i>	Swainson's Hawk	<i>Buteo swainsoni</i>
Horned Grebe	<i>Podiceps auritus</i>	Upland Sandpiper	<i>Bartramia longicauda</i>
Hudsonian Godwit	<i>Limosa haemastica</i>	White-headed Woodpecker	<i>Picoides albolarvatus</i>
Least Bittern	<i>Ixobrychus exilis</i>	Williamson's Sapsucker	<i>Sphyrapicus thyroides</i>
Lewis's Woodpecker	<i>Melanerpes lewis</i>	Yellow Rail	<i>Coturnicops noveboracensis</i>
Loggerhead Shrike	<i>Lanius ludovicianus</i>	Yellow-billed Cuckoo	<i>Coccyzus americanus</i>
Long-billed Curlew	<i>Numenius americanus</i>		

The majority of birds on this list are Neotropical Migratory Species that inhabit eastern Montana. These birds are known or suspected to breed in Montana and spend their winter in the "neotropics" (Central and South America).

The 1988 amendment to the Fish and Wildlife Conservation Act (FWCA) of 1980 (Pub. L. 100-653, Title VIII) requires the Secretary of the Interior, through the U.S. Fish and Wildlife Service, to "identify species, subspecies, and populations of all migratory non-game birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act (ESA) of 1973." *Birds of Conservation Concern 2008* fulfills that mandate.

The species that appear in *Birds of Conservation Concern 2008* are deemed to be the highest priority for conservation actions. We anticipate that this document will be consulted by Federal agencies and their partners prior to undertaking cooperative research, monitoring, and management actions that might directly or indirectly affect migratory birds.

Our objective in publishing this list is to focus conservation attention on bird species of concern well in advance of a possible or plausible need to consider them for listing under the ESA. Inclusion on this list does not constitute a finding that listing under the ESA is warranted, or that substantial information exists to indicate that listing under the ESA may be warranted.

*Birds of Conservation Concern 2008* may be downloaded from Division of Migratory Bird Management's World Wide Web page at <http://migratorybirds/fws.gov>.

## **Biological Assessment**

# Wildlife Monitoring and Protection Plan

*The following document is a sample of the kind and type of measures that could be implemented in the event that the Billings Field Office was to receive a proposal for intensive development on public lands. This example was written specifically for coal bed natural gas development, but can be easily adapted to new types of development and site specific resources. The information is presented here to help guide future development proponents as to the level of detail that may be required. Many of the measures contained herein serve as examples of Conditions of Approval and future monitoring requirements.*

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## **Introduction**

This Wildlife Monitoring and Protection Plan (WMPP) has been revised and updated from the Statewide Oil and Gas Draft Environmental Impact Statement (DEIS) and Amendment of the Powder River and Billings Resource Management Plans (RMPs) (BLM, 2001) for the Final Billings RMP/ EIS. The DEIS and Amendment addressed future exploration and development of BLM and State of Montana managed CBNG resources and conventional oil and gas resources. The WMPP will be implemented on federal lands, including split estate, in cooperation with state agencies, federal agencies, operators, tribal representatives and landowners. If owners and managers of state and private mineral development are willing to incorporate this guidance into management of their activities, they may become a partner by entering into a Cooperative Agreement.

The goal of the WMPP is to avoid or minimize impacts to wildlife and serve as a communication tool to foster cooperative relationships among project proponents, the public, resource management agencies, landowners and adjacent tribal governments. Because this plan addresses a large geographic area composed of diverse wildlife habitats and unique situations, it must be programmatic in nature. However, the need to provide management recommendations and guidance to conserve species and habitats remains. Regional or site specific monitoring and protection plans which follow the guidance provided in this programmatic document will be required as part of each Project Plan. Implementation of this plan during the course of project development and operations should promote wildlife conservation and allow land managers and project personnel to maintain wildlife populations and productivity levels simultaneously with development. It also allows for adaptation of the project plan to ensure the protection of wildlife habitat and species affected.

## **Plan Purpose**

The WMPP was prepared to acquire baseline wildlife information, monitor populations, and assess stipulations or other protection measures for effectiveness. Wildlife stipulations attached to leases provide protective measures: 1) for certain species or habitats, 2) during a particular time period. These stipulations may not address other concerns related to special status species or water/habitat related issues caused by direct and indirect impacts from project development. Because it is purely speculative to predict how all wildlife will react or how development will proceed, it is difficult to develop prescriptive mitigation standards across the entire planning area. Although, BLM has some adaptive management strategies in place (e.g., COAs and compliance inspections), these mechanisms do not give us the information necessary to understand cause and effect relationships. Inventory and monitoring data will be used in adaptive management for improving wildlife management techniques and processes. Therefore, the purpose of this plan is to acquire baseline wildlife information, monitor populations, and assess the effectiveness of stipulations or other protective measures. The WMPP will facilitate our ability to pinpoint problems (including the evaluation of other contributing factors), design



project plans which include conservation for declining species, monitor the effectiveness of decisions, and make recommendations to adjust management to address specific situations.

Project Plans would be required in areas where multiple separate and distinct land disturbing activities may be taking place at different times on different schedules but under one plan. These areas would typically be larger scale and longer term project proposals with potentially significant resource impacts as determined through NEPA analysis. Smaller scale projects with minimal resource impacts would not require Project Plans.

## Area and Objectives

The WMPP document is the framework for wildlife monitoring and protection in the Billings RMP area and provides a template for regional and/or project specific WMPP development. The BLM, MFWP, and FWS will work cooperatively to implement portions of the WMPP over the planning area.

As energy or project development begins, development specific WMPPs, following the same template as this document, will be written in cooperation with other agencies, operators, landowners and other interests. The development analysis will include wildlife impacts from the affected area, and also the cumulative impacts from other developments (including those of other companies) as well as other activities in the area. The objectives of the program are to:

- Establish a framework for cooperation among agencies, operators, landowners, tribal governments and interest groups;
- Provide a process for data collection, data management and reporting;
- Determine needs for inventory, monitoring and protection measures;
- Provide guidance and recommendations for the conservation of wildlife species and habitats;
- Establish protocols for biological clearances or inventories of Special Status Species;
- Meet the terms and conditions of the Biological Opinion;
- Determine if management practices to conserve wildlife species and habitat in stipulations and conservation measures contained in the BLM Record of Decision, are meeting specified objectives;
- Develop recommendations to adjust management actions based on field observations and monitoring results.

Implementation of the WMPP will begin with the issuance of the *Record of Decision* and will remain in effect for the life of a project (up to 25 years). Guidance for the conservation of special status species will be incorporated into the Project Plan. Signatories on an Interagency Cooperative Agreement will serve as the “*Steering Committee (Interagency Working Group)*.” A “*Core Team*” (i.e., agency biologists) will oversee the implementation of the programmatic elements of the WMPP. As development is initiated, operator-funded biologists, approved by the BLM, will write area-specific monitoring and protection plans. These plans will be reviewed by the BLM resource specialists for completeness and content.

Initially, the programmatic template will undergo an annual review for effectiveness. A major review will be conducted every 5 years, or as determined by members of the *Core Team*, *Wildlife*, and *Aquatic Task Groups*. The various cooperators will meet annually (or more often as needed) to evaluate the progress of the various POD inventory and monitoring efforts.

## **Implementation Protocol**

This section provides preliminary wildlife inventory, monitoring, and protection protocol. Required actions for inventory, monitoring and protection vary by species and development intensity. In development areas, Wildlife Reporting, Inventory, and Monitoring requirements are summarized in Table 1. Standard protocol for Survey and Protection Measures way (ROW) for the application of field reviews are provided in Table 2. Alternative measures and protocols will be developed as determined by *Core Team* members in response to specific needs identified in annual reports. This document provides methods for a number of wildlife species/categories. Additional species/categories may be added based on needs identified in annual wildlife reports. The wildlife species/categories for which specific inventory, monitoring, and protection procedures will be applied were developed based on input provided by the public, other agencies, and the BLM.

Considerable efforts will be required by agency and operator personnel for plan implementation. Many of the annually proposed agency data collection activities are consistent with current agency activities. Additionally, agency cost-sharing approaches will be considered such that public demands and statutory directives are achieved.

## **Annual Reports and Meetings**

State and federal agencies will cooperate to implement the programmatic elements of inventory, monitoring and protection actions associated with development in the Billings RMP area. The Montana participants in the Interagency Working Group will oversee implementation across the planning area and summarize information from work achieved in various PODs.

During project development (up to 25 years), to include habitat restoration or rehabilitation efforts, operators will annually provide an updated inventory and description of all existing project features (i.e., location, size, and associated level of human activity at each feature), as well as those tentatively proposed for development during the next 12 months. These data will be coupled with annual wildlife inventory, monitoring, and protection data obtained for the previous year and included in annual reports. Annual reports will be prepared by the BLM. Annual wildlife inventory, monitoring, and protection data gathered by parties other than the BLM (e.g., operators, MFWP) should provide data/summaries to the BLM using current format standards. Upon receipt of this information, annual reports will be completed in draft form by the BLM and submitted to the operators, FWS, MFWP, and other parties. A meeting of the *Core Team* will be organized by the BLM and held annually to discuss and modify, as necessary, proposed wildlife inventory, monitoring, and protection protocol for the subsequent year. Additional meetings will be scheduled as necessary.

Discussions regarding annual operator-specific financing and personnel requirements will occur at these meetings. A formula for determining these requirements will be developed at the first year's meeting (i.e., size of development, anticipated impacts, amount of public land, etc.). A protocol regarding how to accommodate previously unidentified development sites will also be determined during the annual meeting. Final decisions will be made by the BLM based on the input of all affected parties.

A final annual report will be issued by BLM to all potentially affected individuals and groups by early February of each year. Annual reports will summarize annual wildlife inventory and monitoring results, note any trends across years, identify and assess protection measures implemented during past years, specify monitoring and protection measures proposed for the upcoming year, and recommend modifications to the existing WMPP based on the effectiveness and/or ineffectiveness of past years (i.e., identification of additional species/categories to be monitored). Where possible, data presented in reports will be used to identify potential correlations between development and wildlife productivity and/or abundance. The BLM will be the custodian of the data and stored in BLM's Geographic Information System (GIS) for retrieval and planning unless otherwise agreed to by BLM, MFWP and FWS. Raw data collected each year will be provided to other management agencies (e.g., FWS, MFWP) at the request of these agencies. In addition, sources of potential disturbance to wildlife will be identified, where practical (e.g., development activities, weather conditions, etc.). Inventory and monitoring data will be shared on a timely basis by all cooperating agencies.

Additional reports may be prepared in any year, as necessary, to comply with other relevant wildlife laws, rules, and regulations (e.g., black-footed ferret survey reports, mountain plover, sage-grouse lek counts and bald eagle habitat loss reports).

## **Annual Inventory and Monitoring**

This document outlines the inventory and monitoring protocol for a number of selected wildlife species/categories. Protocol will be unchanged except as authorized by the BLM or specified in this plan. Additional wildlife species/categories and associated surveys may be added or wildlife species/categories and surveys may be omitted in future years, depending on the results presented in the coordinated review of annual wildlife reports. MFWP will be contacted during the coordination of survey and other data acquisition phases. Opportunistic wildlife observations may be made throughout the year by agency and operator personnel.

The frequency of inventory and monitoring will be dependent upon the level of development. In general, inventory and monitoring frequency will increase with increased levels of development. The level of effort should also be determined by species presence and development projection. Inventory and monitoring results may lead to further currently unidentifiable studies (i.e., cause and effect). The following sections identify the level of effort required by the WMPP. Site and species-specific surveys will continue to be conducted in association with application or project field reviews.

## Big Game

Elk, mule deer, white-tailed deer, and pronghorn are the common big game species that may occur within parts or all of the project planning area. Annual big game seasonal habitat use data will be collected and made available to operators, Tribes and landowners. Big game use of seasonal habitats is highly dependent upon a combination of environmental factors including terrain, forage quality and snow depth. Therefore, it is difficult to attribute changes in habitat use to a single factor. Comparisons in trends between big game seasonal habitat reference areas and seasonal habitats associated with project development may provide some insight into the response of big game to development.

## General Wildlife

Wildlife mortality from project related development or activities will be documented and reported to the BLM and FWS, and measures will be taken to prevent future mortality. If the mortalities are birds, they will be collected and kept for identification by someone with an appropriate salvage permit. Also, the facilities or activities would need to be “spot checked” by appropriate BLM or FWS personnel to ensure compliance. In no cases would operators or other workers be allowed to be in possession of migratory bird carcasses. Access roads and other roads with project-related traffic increases will be monitored for wildlife mortality so that specific mitigation can be designed and implemented as deemed necessary by BLM, in consultation with MFWP.

## Aquatic Species

Prior to development, baseline aquatic inventories will be conducted in potentially affected areas with operator financial assistance, in an effort to determine occurrence, abundance, and population diversity of the aquatic community. These inventories should be repeated as necessary in selected intermittent/perennial streams associated with produced water discharge, as well as selected intermittent/perennial streams associated with no produced water discharge (control sample site).

Natural fluctuations in species occurrence, abundance, and population diversity will be determined by comparing changes in control sample sites to baseline inventories. Changes in occurrence, abundance, and population diversity of the aquatic community in streams associated with produced water discharge may then be possible by comparing to the natural fluctuations.

Detection of a retraction in the range of a species, a downward trend in abundance, or reduced population diversity in systems with produced water discharge shall warrant a review of Project Plans and possible recommendations for adjustment of management to address the specific problems.

Aquatic groups to be inventoried and monitored will include:

- **Benthic macroinvertebrates** - Determine population diversity using Hess/kick net sampling protocol to measure species abundance and establish a diversity index.

- **Amphibians and aquatic reptiles** - Determine population diversity and abundance utilizing sampling methodologies being developed for prairie species.
- **Non-game fish** - Determine population diversity using electrofishing and seining.
- **Algae (periphyton)** – Determine population diversity.

## Raptors

Raptor inventories will be conducted in the project area every 5 years, with financial assistance being provided by proponents. In potentially affected areas, baseline inventory should be conducted by the BLM (with operator financial assistance) prior to the commencement of development, to determine the location of raptor nests/territories and their activity status. These inventories should be repeated every 5 years (in areas with 1 or less well locations/section) for the life of the project to monitor trends in habitat use. These surveys may be implemented aerially or from the ground. Operators may provide financial assistance for some work. Data collected during the surveys (both inventory and monitoring) will be recorded on BLM approved data sheets and entered into the BLM GIS database. BLM should be contacted prior to commencement of wildlife surveys to insure proper survey protocols are being utilized.

Nest productivity monitoring will be conducted by the BLM or a BLM-approved biologist. Active nests located within 1 mile of project-related disturbance areas will be monitored between March 1 and mid-July to determine nesting success (i.e., number of nestlings/fledglings per nest). These surveys generally will be conducted from the ground. However, some nests may be difficult to observe from the ground due to steep and rugged topography and may require aerial surveys. Operators may provide financial assistance for aircraft rental as necessary. Attempts will be made to determine the cause of any documented nest failure (e.g., abandonment, predation).

Additional raptor nest activity and productivity monitoring measures will be applied in areas with development (i.e., areas with greater than 1 well locations/section) on and within 1 mile of the project area. Inventory/monitoring efforts in these areas, as well as selected undeveloped reference areas will be conducted annually during April and May, followed by nest productivity monitoring. Site and species-specific nest inventories will also continue to be conducted as necessary in association with all application and project field reviews.

All raptor nest/productivity surveys will be conducted using procedures that minimize potential adverse effects to nesting raptors. Specific survey protocol for reducing detrimental effects are listed in Grier and Fyfe (1987) and Call (1978) and include the following:

- Nest visits will be delayed for as long as possible during the nesting season.
- Nests will be approached cautiously, and their status (i.e., number of nestling/fledglings) will be determined from a distance with binoculars or a spotting scope.
- Nests will be approached tangentially and in an obvious manner to avoid startling adults.

- Nests will not be visited during adverse weather conditions (e.g., extreme cold, precipitation events, windy periods, or during the hottest part of the day).
- Visits will be kept as brief as possible.
- Inventories will be coordinated by the BLM.
- The number of nest visits in any year will be kept to a minimum.

### **Threatened, Endangered, Candidate, and Other Species of Concern**

Operators must identify and map the presence of cottonwood riparian, herbaceous riparian or wet meadows, permanent water or wetlands, prairie dog towns, or rock outcrops, ridges or knolls on their application. The presence of sensitive habitat may not indicate a species is present. It does, however, alert the proponent and BLM that a field review and surveys may be required to process the permit or initiate action. The level of effort associated with the inventory and monitoring required for threatened, endangered, candidate, and other species of concern (TEC&SC) will be commensurate with established protocol for the potentially affected species. Methodologies and results of these surveys will be included in annual reports or provided in separate supplemental reports. As TEC&SC species are added to or withdrawn from FWS and/or BLM lists, appropriate modifications will be incorporated to this plan and specified in annual reports.

TEC&SC data collected during the surveys will be provided only as necessary to those requiring the data for specific management and/or project development needs. Site- and species-specific TEC&SC surveys will continue to be conducted as necessary in association with all APD and ROW application field reviews. Data will be collected on BLM approved data sheets and entered into the BLM GIS database.

### **Ferruginous Hawk**

Timing of surveys is very important in documenting the territory, occupancy, success and productivity of ferruginous hawk populations. The accepted survey and monitoring guidelines for ferruginous hawk are taken from the *Survey and Monitoring Guidelines for Ferruginous Hawks in Montana, 1995*.

### **Bald Eagle**

Inventory and monitoring protocol for the bald eagle will be as described for raptors, with the following additions.

- Operators will indicate the presence of eagle habitat (nesting, foraging, roosting, winter) as previously defined on their application.
- Prior to development or construction, surveys of the wooded riparian corridors within 1.0 mile of a project area will be conducted in the winter and/or spring by BLM biologists and/or BLM-approved biologists to determine the occurrence of winter bald eagle roost sites/territories.

- Surveys will be conducted from daybreak to 2 hours after sunrise and/or from 2 hours before sunset to 1 hour after sunset by fixed-wing aircraft. Follow-up ground surveys, if necessary, will be conducted during the same time frame.
- Surveys will be at least 7 days apart. The location, activity, number, and age class (immature, mature) of any bald eagles observed will be recorded.
- If a roost or suspected roost is identified, BLM, FWS, and MFWP will be notified and a GPS record of the roost/suspected roost will be obtained and entered into the BLM GIS database. There will be No Surface Occupancy within 0.5 miles of any identified bald eagle roost site/territories.
- Nest productivity will be conducted by the BLM or a BLM-approved biologist in areas with one or more well locations per section and within 1 mile of the project area.
- Active nests located within one mile of project-related disturbance areas (well sites, pipelines, roads, compressor stations, and other infrastructure) will be monitored on an annual basis between March 1 and mid-July to determine nesting success (i.e., number of nestlings/fledglings per nest).

### **Burrowing Owl**

Operators should indicate the presence of prairie dog towns on their application. The presence of sensitive habitat does not indicate burrowing owls are present. It does, however, alert the proponent and BLM that a field review and surveys may be required to process the permit or initiate action. In association with APD and ROW application field reviews, prairie dog colonies within 0.5 miles of a proposed project or any other suitable habitat within a 0.5 mile radius area, will be surveyed for western burrowing owls by BLM biologists or a BLM-approved operator-financed biologist twice yearly from June through August to determine the presence/absence of nesting owls. Efforts will be made to determine reproductive success (number of fledglings per nest).

### **Black-footed Ferret**

Operators should indicate the presence of prairie dog towns on their application. The presence of sensitive habitat does not necessarily indicate suitable black-footed ferret habitat is present. It does, however, alert the company and BLM that a field review and surveys may be required to process the permit or initiate action. BLM biologists and/or BLM-approved operator-financed biologists will determine the presence/absence of prairie dog colonies within 0.5 miles of proposed activity during APD and ROW application field reviews. Prairie dog colonies on the area will be mapped to determine overall size following the approved methodology. Colony acreage will be determined using GIS applications. Colonies that meet FWS size criteria as potential black-footed ferret habitat (FWS 1989) will be surveyed to determine active burrow density using the methods described by Biggins et al. (1993) or other BLM- and FWS-approved methodology.

Project activity will be located to avoid impacts to prairie dog colonies that meet FWS criteria as black-footed ferret habitat (FWS 1989). If avoidance is not possible, all colonies meeting the FWS size criteria and any colonies for which density estimates are not obtained will be surveyed for black-footed ferrets by an operator-financed, FWS-certified surveyor prior to, but no more than 1 year in advance of disturbance to these colonies. Black-footed ferret surveys will be conducted in accordance with FWS guidelines (FWS 1989) and will be conducted on a site-specific basis, depending on the areas proposed for disturbance in a given year as specified in the annual report. If a black-footed ferret or its sign is found during a survey, all development activity would be subject to recommendations from the *Montana Black-footed Ferret Survey Guidelines, Draft Managing Oil and Gas Activities in Prairie Dog Ecosystems with Potential for Black-footed ferret Reintroduction* and re-initiation of Section 7 Consultation with FWS.

### **Black-tailed and White-tailed Prairie Dog**

The BLM will determine the acreage of occupied black-tailed and/or white-tailed prairie dog habitat within suitable mountain plover habitat on federally managed surface acres and federal mineral estate lands. Further, a reasonable effort should be made to estimate actual impacts, including habitat loss, project development will have on occupied black-tailed and white-tailed prairie dog acres within suitable mountain plover habitat over the entire project area.

Prairie dog towns on BLM lands within 0.5 miles of a specific project area will be identified, mapped, and surveyed as described in the black-footed ferret section. On an annual basis, the BLM and/or a BLM-approved operator-financed biologist will survey, at least a portion of, the prairie dog colonies, including the reference colonies. Prairie dog populations are subject to drastic population fluctuations primarily due to disease (plague). Therefore, efforts will be made to compare the data from the reference colonies with that obtained from the project areas, in order to monitor the response of prairie dog populations to project development.

### **Mountain Plover**

Surface use is prohibited within 1/4 mile of active mountain plover nest sites. Disturbance to prairie dog towns will be avoided where possible. Any active prairie dog town occupied by mountain plover will have Controlled Surface Use between April 1 and July 31, which may be reduced to Controlled Surface Use within 1/4 mile of an active nest, once nesting has been confirmed. An exception may be granted by the authorized officer after the BLM consults with the FWS on a case-by-case basis and the operator agrees to adhere to the new operational constraints.

On federally managed surface acres, black-tailed and white-tailed prairie dog towns greater than 80 acres in size within suitable mountain plover habitat will have a no surface use stipulation from May 1 through June 15. Prior to permit approval, habitat suitability will be determined. The BLM, FWS and MFWP will estimate potential mountain plover habitat across the project area using a predictive habitat model. Over the next 5 years, information will be refined by field validation using most current FWS mountain plover survey guidelines (FWS 2002c) to determine the presence/absence of potentially suitable mountain plover habitat. In areas of suitable mountain plover habitat, surveys will be conducted prior to ground disturbance activities



by the BLM or a BLM-approved operator biologist, using the FWS protocol at the project area, plus a 0.5 mile buffer. Efforts will be made to identify mountain plover nesting areas not subject to development, to be used as reference sites. Comparisons will be made of the trends in mountain plover nesting occupancy between these reference areas and areas experiencing development.

The BLM shall monitor loss of mountain plover habitat associated with all portions of this action (operators will indicate the presence of prairie dog towns or other mountain plover habitat indicators on their application). Suitable mountain plover habitat has been defined under ‘critical habitat’ for the mountain plover in FWS’ Statewide Biological Opinion. The actual measurement of disturbed habitat will be the responsibility of the BLM or their agent (consultant, contractor, etc) with a written summary provided to the FWS’ Montana Field Office, upon project completion or immediately, if the anticipated impact area is exceeded.

## **Sage-Grouse**

Sage-grouse lek inventories will be conducted over the project area every 5 years to determine lek locations. Surveys of different areas may occur during different years with the intent the high potential project areas will be covered at least once every 5 years. Inventories and protocol will be consistent with the *Montana Sage Grouse Conservation Plan*, coordinated by the BLM and MFWP. In areas with development, aerial inventories will be conducted annually on affected sections, 3 mile buffers, and selected undeveloped reference areas. Surveys may be conducted aerially or on the ground, as deemed appropriate by the BLM and MFWP. Operator may provide financial assistance.

Reference leks, identified by BLM and MFWP, are leks located in similar habitat and within close proximity to areas currently being developed.

Aerial surveys will be used for determining lek locations. BLM, MFWP or a BLM-approved operator-financed biologist will monitor sage-grouse lek attendance within 3 miles of areas having development such that all leks on these areas are surveyed at least once every 3 years. Data collected during these surveys will be recorded on BLM and MFWP approved data sheets and entered into the approved database. An effort should also be made to compare trends of the number of males per lek to reference leks.

Sage-grouse winter use surveys of suitable winter habitat within 4 miles of a project area will be coordinated by the BLM and implemented during November through February as deemed appropriate by these agencies. Results will be provided in interim and/or annual reports. Historical information of winter sage-grouse locations will be useful in focusing efforts in areas suspected of providing winter habitat. Sage-grouse winter habitat use surveys will be conducted when suitable conditions exist.

## **Protection Measures**

Wildlife protection measures have been put in place through lease stipulations and project design. Stipulations or mitigation that will be approved in the Final Billings RMP/EIS restrict

activities are designed to reduce the likelihood of “take” of a federally listed species. For all stipulations and mitigation measures that include protection of specific habitats (e.g., sage-grouse winter habitat), identification of the specific habitat areas will be based on the best available science. This may include BLM surveys or information from other sources. For example, researchers have developed sage-grouse habitat models that should provide better information on sage-grouse habitat areas than is currently available.

## **Lease Stipulations and Mitigation Measures**

The lease stipulations will be approved in the Final Billings RMP/EIS. These are mandatory measures or actions developed as a result of wildlife research and input from agencies and operators. Avoidance of important breeding, nesting, and seasonal habitats is the primary protection measure that will reduce the possibility of development having an impact on wildlife populations, productivity, or habitat use. Additional conservation measures will be incorporated through the Project Plan design or as Conditions of Approval. Data collected during monitoring efforts and analyzed will be used to determine the appropriateness and the effectiveness of these measures throughout the project area. Based on the results of the monitoring data, these measures will be reviewed by the *Core Team*. As monitoring data are collected over time, it is likely some protection measures will be added, while others will be modified or removed in cooperation with other agencies and the *Core Team*. All changes in these protection measures will be reported, with a justification for the change, in annual reports. An RMP amendment may be required depending on the recommended change.

## **Waivers, Exceptions and Modifications (WEMs)**

**“Waivers”** A lease stipulation may be waived by the Authorized Officer if a determination is made by the BLM, in consultation with MFWP and/or FWS, that the proposed action will not adversely affect the species in question.

**“Exceptions”** to protection measure may be granted by the Authorized Officer, in coordination with FWS for T&E species and MFWP, if the operator submits a plan that demonstrates impacts from the proposed action will not be significant, or can be adequately mitigated.

**“Modifications”** may be made by the Authorized Officer if it is determined portions of the area do not include habitat protected by the stipulation.

Stipulations will be developed and approved for the following species through the Billings RMP process: Raptors, Bald Eagle, Peregrine Falcon, Big Game, Sage-Grouse, Sharp-tailed grouse, Prairie dogs, Mountain Plover, Sprague’s Pipit and associated black-footed ferret habitat, waterbird colonies, and Yellowstone cutthroat trout.

## **Terms and Conditions from Section 7 Consultation**

In order to be exempt from the prohibitions of Section 9 of the ESA, the Bureau must comply with the following terms and conditions, which will implement the reasonable and prudent

measures described and outlined in the Biological Opinion. **These terms and conditions are nondiscretionary.**

## All Species

In the event, dead or injured wildlife species are located during construction and operation, the FWS, Montana Field Office, Helena, Montana (406-449-5225) will be notified within 24 hours. If the mortalities are birds, they will be collected and kept for identification by someone with an appropriate salvage permit. Also, the project areas would need to be “spot checked” by appropriate BLM or FWS personnel to insure compliance. In no cases would operators or other workers be allowed to be in possession of migratory bird carcasses. The responsible agency must provide for monitoring the actual number of individuals taken. Because of difficulty in identification, all small birds found dead should be stored in a freezer for the FWS to identify.

The Bureau shall monitor all loss of TEC&SC habitat associated with all actions. TEC&SC habitat will be defined under “habitat use” and “critical habitat” respectively, for each species in the Biological Opinion. The actual measurement of disturbed habitat can be the responsibility of the BLM or their agent (consultant, contractor, etc.), with a written summary provided to the FWS’ Montana Field Office upon project completion. The report will include the location and acres of habitat loss, field survey reports, what stipulations were applied, and a record of any variance granted to timing and/or spatial buffers. The monitoring of habitat loss for these species will commence from the date the Record of Decision (ROD) is signed. The actual measurement of disturbed habitat can be the responsibility of the Bureau’s agent (consultant, contractor, etc.) with a written summary provided to the FWS’ Montana Field Office semi-annually, or immediately if the Bureau determines the action (*i.e.* APD, pipeline, compressor station) will adversely affect a listed species. It is the responsibility of the Bureau to ensure the semi-annual reports are complete and filed with the FWS in a timely manner. The semi-annual report will include field survey reports for endangered, threatened, proposed and candidate species for all actions. The semi-annual reports will include all actions completed under this Biological Opinion up to 30 days prior to the reporting date. The first report will be due 6 months from the signing of the ROD and on the anniversary date of the signing of the ROD. Reporting will continue for the life of the project.

All new roads required for the proposed project will be appropriately constructed, improved, maintained, and signed to minimize potential wildlife/vehicle collisions. Appropriate speed limits will be adhered to on all project area roads, and operators will advise employees and contractors regarding these speed limits.

## Bald Eagle

The Bureau shall require implementation of all conservation measures/mitigation measures identified in the Biological Assessment and the Biological Opinion, including the wildlife inventory, monitoring, and protection protocol identified in the WMPP. The Bureau shall monitor for compliance with the measures and protocol. They are as follows:

- The appropriate standard seasonal or year-long stipulations for raptors or no surface occupancy for bald eagles as identified in the Final Billings RMP will be applied.
- Inventory and monitoring protocol for the bald eagle will be as described for raptors, with the following additions. Operators will indicate the presence of eagle habitat as previously defined, on their application. Prior to development or construction, surveys of the wooded riparian corridors within 1.0 mile of a project area will be conducted in the winter and/or spring by BLM biologists and/or BLM-approved biologists to determine the occurrence of winter bald eagle roosts. Surveys will be conducted from daybreak to 2 hours after sunrise and/or from 2 hours before sunset to 1 hour after sunset by aircraft. Follow-up ground surveys, if necessary, will be conducted during the same time frame. Surveys will be at least 7 days apart. The location, activity, number, and age class (immature, mature) of any bald eagles observed will be recorded and if a roost or suspected roost is identified, BLM, FWS, and MFWP will be notified and a GPS record of the roost/suspected roost will be entered into the approved database. No Surface Occupancy will be applied within 0.5 miles of any identified bald eagle roost sites.
- Nest productivity will be conducted by the BLM or a BLM approved biologist in areas with development (i.e., areas with greater than 1 well locations/section) and within 1 mile of the project area. Active nests located within one mile of project-related disturbance areas will be monitored between March 1 and mid-July to determine nesting success (i.e., number of nestlings/fledglings per nest).
- No new above-ground power line should be constructed within ½ mile of an active eagle nest or nest occupied within the recent past. No surface occupancy or use is allowed within 0.5 miles of known bald eagle nest sites which have been active within the past 5 years. All other actions will be consistent with the *Montana Bald Eagle Management Plan - July 1994*.
- Power lines will be built to standards identified by the Power Line Interaction Committee (2006) to minimize electrocution potential. The FWS has more specific recommendations that reaffirm and complement those presented in the *Suggested Practices*. It should be noted these measures vary in their effectiveness to minimize mortality, and may be modified as they are tested. Local habitat conditions should be considered in their use. The FWS does not endorse any specific product that can be used to prevent and/or minimize mortality; however, we are providing a list of Major Manufacturers of Products to Reduce Animal Interactions on Electrical Utility Facilities.

## **New Distribution Lines and Facilities**

- The following represents areas where the raptor protection measures will be applied when designing new distribution line construction:
- Bury distribution lines where feasible.
- Raptor-safe structures (e.g., with increased conductor-conductor spacing) are to be used (i.e., minimum 60" for bald eagles would cover all species).

- Equipment installations (overhead service transformers, capacitors, reclosers, etc.) are to be made raptor safe (e.g., by insulating the bushing conductor terminations and by using covered jumper conductors).
- Jumper conductor installations (e.g., corner, tap structures, etc.) are to be made raptor safe by using covered jumpers or providing adequate separation.
- Employ covers for arrestors and cutouts.
- Lines should avoid high avian use areas such as wetlands, prairie dog towns, and grouse leks. If not avoidable, use anti-perching devices to discourage perching in sensitive habitats such as grouse leks, prairie dog towns and wetlands to decrease predation and decrease loss of avian predators to electrocution.

### **Modification of Existing Facilities**

Raptor protection measures to be applied when retrofitting existing distribution lines in an effort to reduce raptor mortality. Problem structures may include dead ends, tap or junction poles, transformers, reclosers and capacitor banks or other structures with less than 60" between conductors or a conductor and ground. The following modifications will be made:

- Cover exposed jumpers.
- Gap any pole top ground wires.
- Isolate grounded guy wires by installing insulating link.
- On transformers, install insulated bushing covers, covered jumpers, cutout covers and arrestor covers.
- When raptor mortalities occur on existing lines and structures, raptor protection measures are to be applied (e.g., modify for raptor-safe construction, install perches, perching deterrents, nesting platforms, nest deterrent devices, etc).
- Use anti-perching devices to discourage perching in sensitive habitats such as grouse leks, prairie dog towns and wetlands to decrease predation, and decrease loss of avian predators to electrocution.
- In areas where midspan collisions are a problem, install effective line-marking devices. All transmission lines that span streams and rivers or in known or discovered raptor migration areas, should maintain proper spacing and have markers installed.
- These additional standards to minimize migratory bird mortalities associated with utility transmission lines will be incorporated into the Terms and Conditions for all APDs and stipulations for ROW applications.

### **Mountain Plover**

The Bureau shall require implementation of the conservation measures for mountain plover as identified in the Biological Assessment dated October 2006, and the wildlife inventory, monitoring, and protection protocol addressed in the *WMPP*. The Bureau shall monitor for compliance with the measures and protocol. They are as follows:

- Surface use is prohibited within 1/4 mile of active mountain plover nest sites.  
Disturbance to prairie dog towns will be avoided where possible. Any active prairie

dog town occupied by mountain plovers will have a Controlled Surface Use stipulation applied between April 1 and July 31. This area may be reduced to No Surface Use within 1/4 mile of an active nest once nesting has been confirmed. An exception may be granted by the authorized officer after the BLM consults with the FWS and the operator agrees to adhere to the new operational constraints.

- Due to the declining status of mountain plover in the analysis area and the need to retain the most important and limited nesting habitat, all active prairie dog colonies on federal surface within suitable mountain plover habitat will have No Surface Occupancy applied. This No Surface Occupancy may be modified through an amendment to the biological opinion after analysis of impacts to this preferred nesting habitat is completed.
- BLM will determine the acreage of occupied black-tailed and white-tailed prairie dog habitat within suitable mountain plover habitat on federally managed surface and mineral estate lands. Further, a reasonable effort should be made to estimate the actual impacts, including habitat loss, development will have on occupied black-tailed and white-tailed prairie dog acres within suitable mountain plover habitat over the entire project area. The BLM, FWS, and cooperators will develop a survey protocol that may include prioritization of subsets of the project area to be analyzed. Based on the results of such analysis, No Surface Occupancy on active prairie dog habitat within suitable mountain plover habitat may be modified utilizing an amendment to the biological opinion.
- Prior to permit approval, habitat suitability will be determined. The BLM, FWS or MFWP will estimate potential mountain plover habitat across the project area using a predictive habitat model. Over the next 5 years, information will be refined by field validation using most current FWS mountain plover survey guidelines (FWS 2002c) to determine the presence/absence of potentially suitable mountain plover habitat. In areas of suitable mountain plover habitat, surveys will be conducted prior to ground disturbance activities by the BLM or a BLM-approved biologist using the FWS protocol at a specific project area plus a 0.5 mile buffer. Efforts will be made to identify mountain plover nesting areas not subject to development as reference sites. Comparisons will be made of the trends in mountain plover nesting occupancy between these reference areas and areas experiencing project development.
- BLM shall monitor all loss of mountain plover habitat associated with this action (operators will indicate the presence of prairie dog towns or other mountain plover habitat indicators on their application). Suitable mountain plover habitat has been defined under 'critical habitat' for the mountain plover in the Biological Opinion. The actual measurement of disturbed habitat can be the responsibility of the BLM, its agent (consultant, contractor, etc) with a written summary provided to the FWS' Montana Field Office upon completion or immediately if the anticipated impact area is exceeded relative to the estimated surface disturbances defined in the SEIS.

- If suitable mountain plover habitat is present, surveys for nesting mountain plovers will be conducted prior to ground disturbance activities, if ground disturbing activities are anticipated to occur between April 10 and July 10. Disturbance occurring outside this period is permitted, but any loss of mountain plover suitable habitat must be documented. Sites must be surveyed 3 times between the April 10 and July 10 period, with each survey separated by at least 14 days. The earlier date will facilitate detection of early-breeding plovers. A disturbance-free buffer zone of 1/4 mile will be established around all mountain plover nesting locations between April 1 and July 31. If an active nest is found in the survey area, the planned activity should be delayed 37 days, or seven days post-hatching. If a brood of flightless chicks is observed, activities should be delayed at least seven days (FWS 2002). Exceptions and/or waiver to stipulations can be made by the BLM through consultation with the FWS.
- Roads will be located outside of nesting plover habitat where possible. Apply mitigation measures to reduce mountain plover mortality caused by increased vehicle traffic. Construct speed bumps, use signing or post speed limits as necessary to reduce vehicle speeds near mountain plover habitat.
- Creation of hunting perches will be minimized within 1/2 mile of occupied nesting areas. Utilize perch inhibitors (perch guards) to deter predator use.
- Native seed mixes will be used to re-establish short grass vegetation during reclamation.
- There will be No Surface Occupancy of ancillary facilities (e.g., compressor stations, processing plants) within 1/4 mile of known nesting areas. Variance may be granted after consultation with the FWS.
- In habitat known to be occupied by mountain plover, no dogs will be permitted at work sites to reduce the potential for harassment of plovers.
- The FWS will provide operators and the BLM with educational material illustrating and describing the mountain plover, its habitat needs, life history, threats, and development activities that may lead to incidental take of eggs, chicks, or adults. This information will be required to be posted in common areas and circulated in a memorandum among all employees and service providers.

## **Programmatic Guidance for the Development of Project Plans**

Guidance for developing Project Plans and/or conservation measures applied as COAs provide a full range of practicable means to avoid or minimize harm to wildlife species or their habitats. Operators will minimize impacts to wildlife by incorporating applicable WMPP programmatic guidance into project plans. Not all measures may apply to each site-specific development area and means to reduce harm are not limited to those identified in the WMPP. This guidance may

change over time if new conservation strategies become available for Special Status Species or if monitoring indicates the measure is not effective or unnecessary.

BLM and MFWP will work together to collect baseline information about wildlife and sensitive habitats possibly containing special status species. During the project development phase, operators will identify potentially sensitive habitats and coordinate with BLM to determine which species or habitats are of concern within or adjacent to the project area. In areas where required site-specific wildlife inventories have not been completed, operators and BLM will work cooperatively to achieve this. BLM's responsibilities under NEPA and ESA essentially are the same on split estate as they are with federal surface. BLM and operators will seek input from the private surface owner to include conservation measures in split estate situations.

The following guidance and conservation measures are considered "features" or project "design criteria" to be used during Project Plan preparation. The design of projects can incorporate conservation needs for wildlife species or measures can be added as COAs. These types of conservation actions offer flexibility for local situations and help minimize or eliminate impacts to the species of interest.

1. Use the best available information for siting structures (e.g., storage facilities, generators and holding tanks) outside the zone of impact in important wildlife breeding, brood-rearing and winter habitat based on the following considerations:
  - a. size of the structure(s),
  - b. level/type of anticipated disturbance
  - c. life of the operation, and
  - d. extent to which impacts would be minimized by topography.
2. Concentrate energy-related facilities when practicable.
3. Encourage development in incremental stages to stagger disturbance; design schedules that include long-term strategies to localize disturbance and recovery within established zones over a staggered time frame.
4. Prioritize areas relative to their need for protection, ranging from complete protection to moderate to high levels of energy development.
5. Develop a comprehensive Project Plan for a single activities in one area or for multiple activities in one or several areas, to minimize road densities. Project Plans would be required in areas where multiple separate and distinct land disturbing activities may be taking place at different times on different schedules but under one plan. Also, these areas would typically be larger scale and longer term project proposals with potentially significant resource impacts as determined through NEPA analysis. Smaller scale projects with minimal resource impacts would not require Project Plans.



6. To reduce additional surface disturbance, existing roads and two-tracks on and adjacent to the project area will be used to the extent possible and will be upgraded as necessary.
7. Minimize stream channel disturbances and related sediment problems during construction of road and installation of stream crossing structures. Do not place erodible material into stream channels. Remove stockpiled material from high water zones. Locate temporary construction bypass roads in locations where the stream course will have minimal disturbance. Time construction activities to protect fisheries and water quality.
8. Design stream-crossings for adequate passage of fish (if potential exists). Minimize impacts on water quality and, at a minimum, the 25-year frequency runoff. Consider oversized pipe when debris loading may pose problems. Ensure sizing provides adequate length to allow for depth of road fill.
9. Use corridors to the maximum extent possible: roads, power, gas and water lines should use the same corridor whenever possible.
10. Avoid, where possible, locating roads in crucial sage-grouse breeding, nesting and wintering areas and mountain plover habitats. Develop roads utilizing topography, vegetative cover, site distance, etc. to effectively protect identified wildlife habitats.
11. Conduct all road and stream crossing construction and maintenance activities in accordance with agency approved mitigation measures and BMPs.
12. Utilize remote monitoring technologies whenever possible to reduce site visits thereby reducing wildlife disturbance and mortalities.
13. All new roads required for the proposed project will be appropriately constructed, improved, maintained, and signed to minimize potential wildlife/vehicle collisions and facilitate wildlife movement through the project area. Appropriate speed limits will be adhered to on all project area roads, and operators will advise employees and contractors regarding these speed limits.
14. Road closures may be implemented during crucial periods (e.g., extreme winter conditions, and calving/fawning seasons). Personnel will be advised to minimize stopping and exiting their vehicles in big game winter range.
15. Roads no longer required for operations or other uses will be reclaimed if required by the surface owner or surface management agency. Reclamation will be conducted as soon as practical.
16. Operator personnel and contractors will use existing state and county roads and approved access routes, unless an exception is authorized by the surface management agency.

17. Use minimal surface disturbance to install roads and pipelines. Reclaim sites of abandoned wells to restore native plant communities.
18. Reclamation of disturbed areas will be initiated as soon as practical. Native species will be used in the reclamation of important wildlife habitat. Wildlife habitat needs will be considered during seed mix formulation.
19. Locate storage facilities, generators, and holding tanks outside the line of sight and sound of important sage-grouse breeding habitat.
20. Minimize ground disturbance in sagebrush stands with documented use by sage-grouse:
  - a. breeding habitat – the lek and associated sagebrush;
  - b. nesting habitat – sagebrush within 4 miles of a lek; and
  - c. wintering habitat – sagebrush with documented winter use by sage-grouse.
21. Site new power lines and pipelines in disturbed areas wherever possible; remove overhead powerlines when use is complete.
22. Minimize the number of new overhead power lines in sage-grouse or mountain plover habitat. Use the best available information for siting powerlines in important sage-grouse breeding, brood-rearing, and winter habitat. Bury lines in sage-grouse and mountain plover habitat, when feasible.
23. Restrict timing for powerline installation to prevent disturbance during critical sage-grouse periods (breeding March 1 – June 15; winter December 1 –March 31).
24. If above ground powerline siting is required within 2 miles of important sage-grouse breeding, brood-rearing, and winter habitat, emphasize options for preventing raptor perch sites utilizing Avian Powerline Action Committee 2006 guidelines.
25. Encourage monitoring of avian mortalities by entering into a Memorandum of Understanding with FWS and the state agencies to establish procedures and policies to be employed by the parties to lessen industry’s liability concerns about the “take” of migratory birds.
26. Remove unneeded structures and associated infrastructure when project is completed.
27. Restrict maintenance and related activities in sage-grouse breeding/nesting complexes; 15 March -15 June, between the hours of 4:00-8:00 am and 7:00-10:00 pm.
28. Restrict noise levels from production facilities to 50 decibels (10 dBa above background noise at the lek).

29. Restrict use of heavy equipment that exceeds 50 dBa within 2 miles of a lek from 4-8am and 7-10pm during April 1 – June 30.
30. Protect, to the extent possible, natural springs from disturbance or degradation.
31. Design and manage produced water storage impoundments so as not to degrade or inundate sage-grouse leks, nesting sites and wintering sites, prairie dog towns or other Special Status Species habitats.
32. Produced water should not be stored in shallow, closed impoundments or playas. Impoundments designed as flow through systems will lessen the likelihood selenium will bio-accumulate to levels adversely affecting other wildlife.
33. Develop offsite mitigation strategies in situations where fragmentation or degradation of Special Status Species habitat is unavoidable.
34. Protect reserve, workover, and production pits potentially hazardous to wildlife by netting and/or fencing as directed by the BLM to prevent wildlife access and minimize the potential for migratory bird mortality.
35. Reduce potential increases in poaching through employee and contractor education regarding wildlife laws. Operators should report violations to BLM and MFWP.
36. Operator employees and their contractors will be discouraged from possessing firearms while working.

**Table 1. Summary of General Wildlife Reporting, Inventory, and Monitoring, Billings Resource Management Plan**

<b>Action</b>	<b>Dates</b>	<b>Responsible Entity</b>
Project plans for outcoming years, showing general location of proposed development	Annually	Team (BLM, FWS, MFWP, operators)
Annual reports summarizing findings and presenting necessary protection measures	Annually	BLM with reviews MFWP, FWS, operators, and other interested parties
Meeting to finalize future year's inventory, monitoring, and protection measures	Annually	BLM with participation by FWS, MFWP, operators, and other interested parties
<b>Inventory and Monitoring</b>		
Big game use monitoring	When Applicable	BLM with assistance
Determine mountain plover habitat suitability	Prior to permit approval	BLM & operator assistance
In areas of suitable mountain plover habitat, conduct nest surveys in project area, plus a .5 mile buffer	Prior to ground disturbing activities	BLM & operator assistance
In areas of suitable mountain plover habitat, map active black-tailed prairie dog colonies on federal mineral estate.	Prior to permit approval	BLM & operator assistance
Active prairie dog colonies within .5 mile of a specific project area will be identified, mapped and surveyed	Prior to permit approval	BLM with operator assistance
Raptor nest inventories (POD areas plus 1 mile buffer; burrowing owls excluded)	Every 5 years during April and May but prior to permit approval	BLM with operator assistance
In areas with potential bald eagle winter roost sites/territories, conduct surveys within one mile of project area	Prior to ground disturbing activities	BLM & operator assistance
Conduct bald eagle nest inventories within one mile buffer of project area	Between March 1 and mid-July	BLM & operator assistance
Monitor productivity at active bald eagle nests within one mile of project-related disturbance	Between March 1 and mid-July	BLM & operator assistance
Raptor next productivity monitoring at active nests within one mile of project disturbance area	Annually March to mid-July	BLM with operator assistance
Sage-grouse lek inventories (project area plus three mile buffer)	Every 5 years	BLM with operator assistance
Sage-grouse lek attendance monitoring on and within 3miles of the POD boundary	Annually	BLM with operator assistance will visit selected leks each year so that all leks will be visited annually
Threatened, Endangered & Sensitive species inventory/monitoring within	When Applicable	BLM with operator assistance

**Table 1. Summary of General Wildlife Reporting, Inventory, and Monitoring, Billings Resource Management Plan**

Action	Dates	Responsible Entity
selected CBNG development areas		
Other wildlife species inventory/monitoring within selected CBNG development areas	When Applicable	BLM with operator assistance

**Table 2. Summary of Survey and Protection Measures, for Development within the Billings Resource Management Plan**

Protection Measure	Dates
Bald eagle nest surveys within 1 mile of project area	Yearlong
Bald eagle nest avoidance within 0.5 mile of active nests	No Surface Use or Occupancy
Bald Eagle Winter Roost surveys within 1 mile of project area	December 1 to April 1
Bald Eagle Winter Roost avoidance within 0.5 miles of roost site	No Surface Use or Occupancy
Black-footed ferret surveys	Prairie dog colonies > 80 acres
Mountain plover surveys within 0.5 miles of project area	May 1 to June 15
Active prairie dog colonies on federal surface in mountain plover habitat	BLM & operator assistance
Mountain plover nest/brood avoidance within .25 miles of project area	April 1 to July 31
Peregrine falcon nest avoidance within 1 mile of active nest	No Surface Use or Occupancy
Threatened, Endangered & Sensitive species surveys	As necessary
Threatened, Endangered & Sensitive species avoidance	As necessary
Big game crucial winter range avoidance	December 1 – March 31
Elk Parturition Range avoidance	April 1 – June 15
Big Horn Sheep – Powder River Breaks	No Surface Use or Occupancy
Prairie dog colony mapping and burrow density determinations	Yearlong
Raptor nest survey/inventory within 0.5 miles of project area	Yearlong
Raptor nest avoidance within 0.5 miles of active nests	March 1 – August 1
Sage-grouse nesting habitat avoidance on areas within 4.0 miles of a lek	April 1 – June 30

Sage-grouse and sharp-tailed grouse lek avoidance within 0.6 miles of a lek	No Surface Use or Occupancy
Sharp-tailed grouse nesting habitat avoidance on areas within 2 miles of a lek	March 1 – June 15
Western burrowing owl surveys (prairie dog colonies within 0.5 miles of disturbance)	June – August
General wildlife avoidance/protection	As necessary

**NOTE:**

In areas of higher or more intensive development, the frequency and timing of inventory and monitoring may need to be increased or expanded to address potential resource impacts. Additional monitoring, inventory, or studies may need to be conducted on areas of development and selected undeveloped comparison or control areas.

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- U.S. Fish and Wildlife Service. 1989.** Black-footed ferret survey guidelines for compliance with the *Endangered Species Act*. U.S. Fish and Wildlife Service, Denver Colorado, and Albuquerque, New Mexico (April 1989). 10pp. +append
- U.S. Fish and Wildlife Service. 2002c.** Mountain Plover survey guideline. U.S. Fish and Wildlife Service, Denver, Colorado. 7pp.

## **Requirements and/or Guidelines for Wildlife Controlled Surface Use Stipulations or Exceptions to No Surface Occupancy Stipulations**

Plans that are required by controlled surface use (CSU) stipulations or exceptions to no surface occupancy stipulations for crucial winter range, greater sage-grouse habitat, bighorn sheep range, and other Special Status Species areas will be subject to the following requirements and/or guidelines. These requirements and guidelines may be modified based on the best available science and research, and best management practices.

### **The plan shall address:**

- Mitigation or methods that would be used to abate continuous noise (related to long-term operations and/or activities) or temporary noise (related to installation, maintenance, one-time use, emergency operations, etc.) to minimize disruption to wildlife.
- The management of water developments to reduce the spread of West Nile virus within greater sage-grouse habitat areas. The placement of linear rights-of-way (ROW) to reduce disturbance to wildlife.
- The placement of new utility developments (powerlines, pipelines, etc.) and transportation routes in a manner that does not impact wildlife such as through eliminating the need for powerlines or burying powerlines.
- The design and placement of high profile structures exceeding 10 feet in height in a manner that does not impact wildlife.
- The reduction of the frequency of human visitation at wells sites such as through remote monitoring of production facilities.
- Interim reclamation on long-term access roads and well pads including reshaping, topsoiling and revegetating cut and fill slopes to maximize the habitat restoration.
- Restoration of disturbed areas at final reclamation to pre-disturbance conditions or desired plant community.
- Placement of permanent (longer than 2 months) structures which create movement to minimize impacts to wildlife.

### **The plan shall consider:**

- The use of off-site mitigation, (e.g., creation of sagebrush habitat or conservation easements) with proponent dollars to offset habitat losses.
- The creation of a “*Mitigation Trust Account*” when impacts cannot be avoided, minimized, or effectively mitigated through other means. If approved by the BLM, the proponent may contribute funding to maintain habitat function based on the estimated cost of habitat treatments or other mitigation needed to maintain the functions of impacted habitats. Off-site mitigation should only be considered when no feasible options are available to adequately mitigate within and immediately adjacent to the impacted site, or when the off-site location would provide more effective mitigation of the impact than can be achieved on-site.



## **Crucial Areas Planning System (CAPS)**

### **Montana Fish, Wildlife and Parks Crucial Areas Planning System User's Guide Version 1.0 –April 2010**

In 2008, Montana Fish, Wildlife & Parks (MTFWP) took the lead in conducting a Crucial Areas Assessment. The Assessment evaluated the fish, wildlife and recreational resources of Montana in order to identify crucial areas and fish and wildlife corridors. The result, in part, is a Web-based **Crucial Areas Planning System (CAPS)**, a new MTFWP mapping service aimed at future planning for a variety of development and conservation purposes so fish, wildlife, and recreational resources can be considered earlier.

The Crucial Areas Planning System (CAPS) is intended to provide useful and non-regulatory information during the early planning stages of development projects, conservation opportunities, and environmental review.

CAPS is not intended to replace consultation with MTFWP staff. In cases where federally threatened or endangered species occur, CAPS does not replace a federal consultation under the Endangered Species Act.

Finest data resolution is at the square mile section scale or waterbody, and use of these data layers at a more localized scale is not appropriate and may lead to inaccurate interpretations. The classification may or may not apply to the entire section. Consult the local MTFWP biologist for more localized information.

### **How Data Are Used in This RMP:**

CAPS data used in this RMP are from the “Big Game Winter Range Habitat” CAPS Score 1 & 2. Big game data is for the protection of big game winter ranges. Refer to maps 15-20 for a current map of habitat within the Billings Field Office.

Attached are descriptions of the assessment process used by MTFWP. In the future, changes, revisions, or elimination of this data will be coordinated and agreed upon with MTFWP.



## Montana Fish, Wildlife & Parks Crucial Areas Assessment



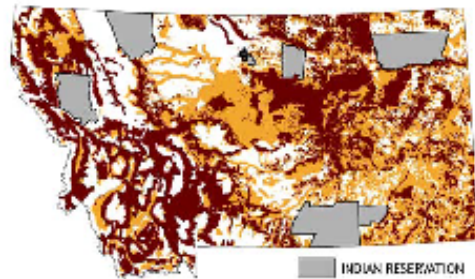
### NATIVE GAME SPECIES

#### Big Game Winter Range Habitat

**SUMMARY:** This layer depicts the relative value of habitats providing big game winter range for elk, white-tailed deer, mule deer, antelope and moose.

**MEASUREMENT UNIT:** Public land survey sections - approximately one square mile.

**MAPPING CONSIDERATIONS:** Indian reservations were not evaluated due to a lack of data. National park lands are not currently represented in big game distribution layers and therefore have lower than expected values in some areas.



#### DATA SOURCE(S) / QUALITY:

**Big Game:** *Metric Evaluated:* Winter range habitat value. *Species:* pronghorn antelope, elk, moose, mule deer and white-tailed deer. *Data Layers:* big game distribution - publicly available for individual species, maintained by FWP. Layers are updated using expert knowledge, which includes known habitat associations and extrapolation from survey data. Resolution is based upon 1 square mile public land survey sections; Montana land cover classification - draft layer maintained by the Montana Natural Heritage Program (NHP) Spatial Analysis Lab, University of Montana. Classification based upon remote sensing. Resolution is 30 meters

**METHODS:** Big game habitat values were determined by assigning points based on species use and habitat quality. All winter habitat was assigned an initial score of 1 and an additional point was assigned for more highly valued areas. Following is a description areas that were assigned higher values. In the western mountains, areas identified as winter use in the species distribution layers received one point. In the Northwest (FWP Region 1) winter use of elk or white-tail deer was given an additional point. In the Southwest (FWP Regions 2 & 3), elk or mule deer was given an additional point. For the rest of the state, areas identified as winter use areas for one species received a point

and an additional point if the area was winter range for additional species. Also, sagebrush grassland habitats were used to identify important habitats in the prairie environment where winter ranges are less distinct. Areas containing >50% sagebrush grassland, received one point and areas containing >75% sagebrush grassland were given an additional point. The final summed value was rescaled to 0 to 1 before being combined with the other species categories.

#### DATA SOURCES

- ☐ Survey data - counts or estimates
- ☐ Survey data - categorical (e.g. presence/absence)
- ☒ Expert opinion based on observation

#### DATA EXTRAPOLATION TECHNIQUE USED

- ☐ None
- ☐ Modeling of habitat-species associations (deductive)
- ☐ Statistical modeling (inductive)
- ☐ Extrapolation to habitat unit (e.g. stream section)
- ☒ Extrapolation based on expert opinion

Full documentation @ <http://fwp.mt.gov/fishAndWildlife/conservationAction/crucialAreas.html>



## Montana Fish, Wildlife & Parks Crucial Areas Assessment

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**FINAL CATEGORIZATION:** The resulting scores ranged from 0 to 2. A score of 0 indicates the area was not identified as having winter range present. A score of 1 indicates important winter range habitats. A score of 2 indicates highly valued winter range habitats. Big game winter range was given twice the value of the other species groups for the calculation of the cumulative native game layer.

CATEGORY	PERCENT OF STATE
SCORE 2 (High)	35.6 %
SCORE 1 (Moderate)	30.0 %

**CONTACT:** Adam Messer, FWP – Data Services Section; 406.444.0095; [amesser@mt.gov](mailto:amesser@mt.gov)

**DATE MODIFIED:** April 7, 2010 – V 1.0

Full documentation @ <http://fwp.mt.gov/fishAndWildlife/conservationInAction/crucialAreas.html>

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